

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: MUD POND	Lake Area (ha):	21.29
Town: DUBLIN	Maximum depth (m):	1.6
County: Cheshire	Mean depth (m):	0.5
River Basin: Merrimack	Volume (m <sup>3</sup> ):	113500
Latitude: 42°54' N	Relative depth:	0.3
Longitude: 72°01' W	Shore configuration:	3.06
Elevation (ft): 1050	Areal water load (m/yr):	88.99
Shore length (m): 5000	Flushing rate (yr <sup>-1</sup> ):	166.8
Watershed area (ha): 3393.6	P retention coeff.:	0.25
% watershed ponded: 4.6	Lake type:	natural w/dam

BIOLOGICAL:

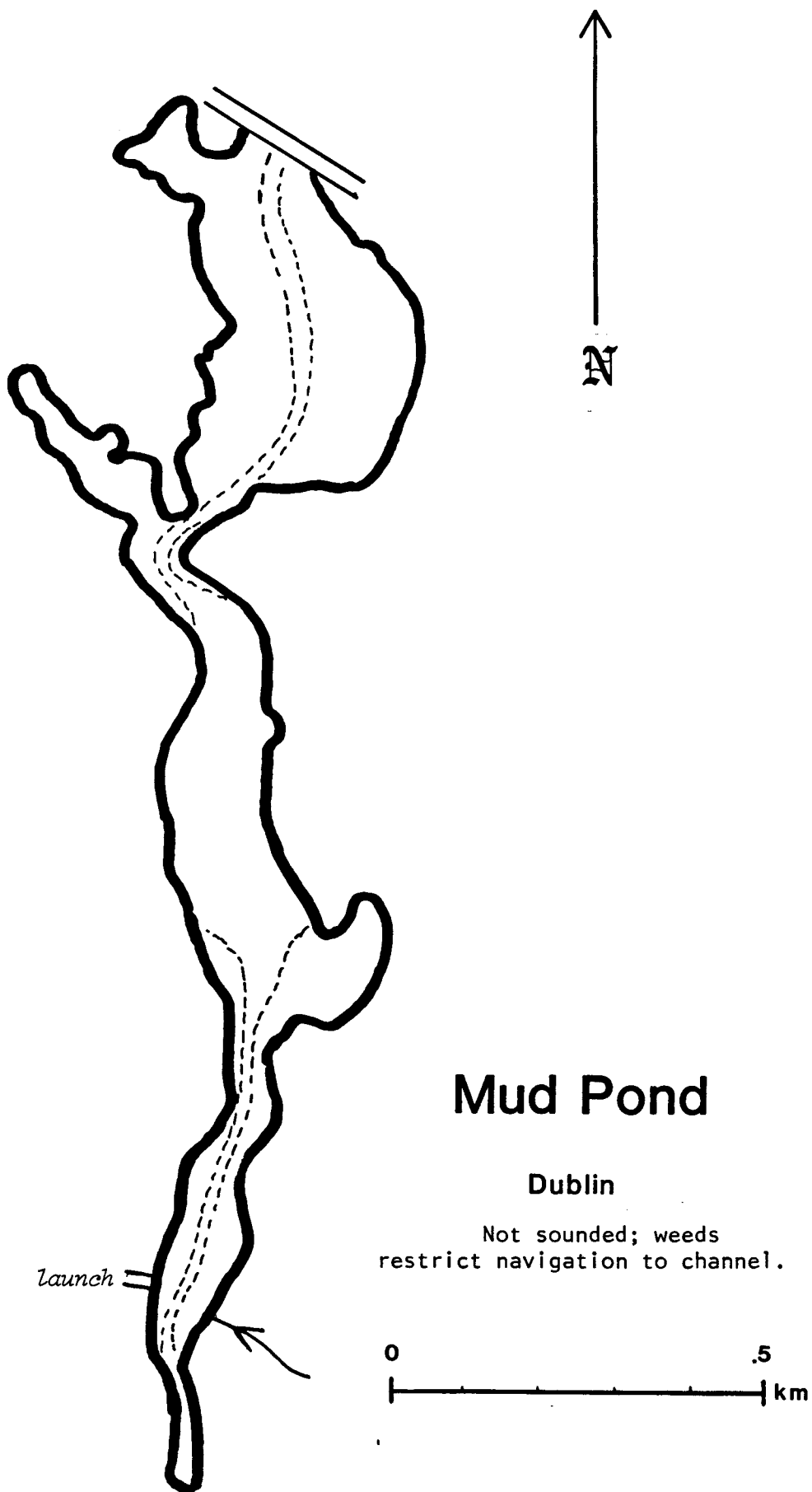
	1 March 1988	13 July 1987
DOM. PHYTOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	FILAMENT GREEN SPP 95%
#2		
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		
CHLOROPHYLL-A (µg/L)		11.51
DOM. ZOOPLANKTON (% TOTAL) #1	NONE OBSERVED	SPARSE - NO DOMINANT
#2		
#3		
ROTIFERS/LITER		
MICROCRUSTACEA/LITER		
ZOOPLANKTON ABUNDANCE (#/L)		
VASCULAR PLANT ABUNDANCE		Very abundant
SECCHI DISK TRANSPARENCY (m)		1.0
BOTTOM DISSOLVED OXYGEN (mg/L)	13.0	2.9
BACTERIA (fecal col., #/100 ml) #1		40
#2		
#3		

SUMMER THERMAL STRATIFICATION:

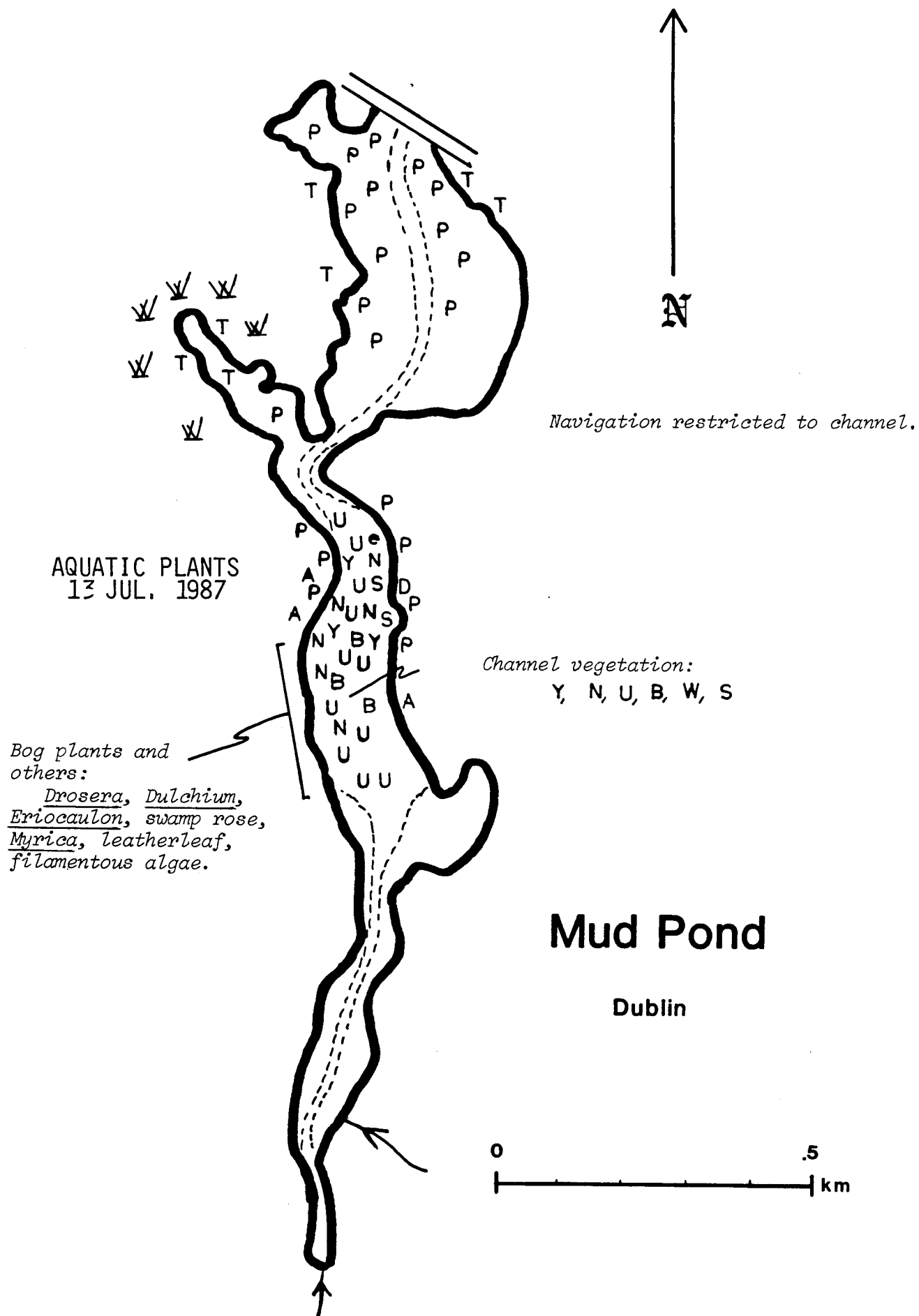
not stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>): None

<u>CHEMICAL:</u>		Lake: MUD POND Town: DUBLIN															
	1 March 1988		13 July 1987														
DEPTH (m)	1.0		1.0														
pH (units)	5.9		6.3														
A.N.C. (Alkalinity)	3.4		7.1														
NITRATE NITROGEN	< 0.05		< 0.05														
TOTAL KJELDAHL NITROGEN	0.22		0.55														
TOTAL PHOSPHORUS	0.004		0.013														
CONDUCTIVITY ( $\mu$ mhos/cm)	38.0		51.3														
APPARENT COLOR (cpu)	20		130														
MAGNESIUM			0.81														
CALCIUM			2.7														
SODIUM			5.9														
POTASSIUM			0.50														
CHLORIDE	5		6														
SULFATE	5		2														
TN : TP	55		42														
CALCITE SATURATION INDEX			3.7														
All results in mg/L unless indicated otherwise																	
<u>TROPHIC CLASSIFICATION: 1987</u> <table style="float: right; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">D.O.</td> <td style="padding: 2px 10px;">S.D.</td> <td style="padding: 2px 10px;">PLANT</td> <td style="padding: 2px 10px;">CHL</td> <td style="padding: 2px 10px;">TOTAL</td> <td style="padding: 2px 10px;">CLASS</td> </tr> <tr> <td style="border: 1px solid black; text-align: center; width: 50px;">**</td> <td style="border: 1px solid black; text-align: center; width: 50px;">3</td> <td style="border: 1px solid black; text-align: center; width: 50px;">4</td> <td style="border: 1px solid black; text-align: center; width: 50px;">3</td> <td style="border: 1px solid black; text-align: center; width: 50px;">10</td> <td style="border: 1px solid black; text-align: center; width: 100px;">Eutro.</td> </tr> </table>						D.O.	S.D.	PLANT	CHL	TOTAL	CLASS	**	3	4	3	10	Eutro.
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**	3	4	3	10	Eutro.												
<u>COMMENTS:</u>  1. This is primarily a river channel running through a wetland area. Navigation was limited to the channel.  2. There is a noticeable water flow in the channel.  3. No whole-water phytoplankton analysis was done.  4. No soundings were taken since navigation was limited by weeds to a narrow channel.																	



[illegible]



AQUATIC PLANT SURVEY				
LAKE: MUD POND		TOWN: DUBLIN		DATE: 07/13/87
Key	PLANT NAME		ABUNDANCE	
	GENERIC	COMMON		
S	Sparganium	Bur reed	Scattered	
U	Utricularia	Bladderwort	Very abundant	
N	Nymphaea	White water lily	Abundant	
Y	Nuphar	Yellow water lily	Abundant	
	Chamaedaphne calyculata	Leatherleaf		
P	Pontederia cordata	Pickerselweed	Very abundant	
	Myrica gale	Sweet gale		
W	Potamogeton	Pondweed	Abundant	
	Dulichium arundinaceum	Three-way sedge		
	Nitella	Stonewort		
	Scirpus	Bulrush	Scattered	
	Drosera	Sundew		
	Rosa	Swamp rose	Sparse	
	Chlorophyceae	Filamentous green algae		
A	Peltandra virginica	Arrow arum	Common	
T	Typha	Cattail	Scattered	
e	Eleocharis	Spike rush		
B	Brasenia schreberi	Water shield	Abundant	
	Eriocaulon septangulare	Pipewort		
	Equisetum	Horsetail		

OVERALL ABUNDANCE: Very abundant

GENERAL OBSERVATIONS:

- Plants were very abundant. Pickerselweed dominated the macrophyte community up to the river channel; bladderwort and the broad-leaved plants were dominant in the channel.
- Because of the over-abundance of plants, this is a rough plant survey at best. A number of plants were observed and are listed, but are not depicted on the map and some are not given an abundance rating.
- Nitella was found on the bottom and is presumably over much of the bottom.